* * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:37:59 ON 05 JUN 2006

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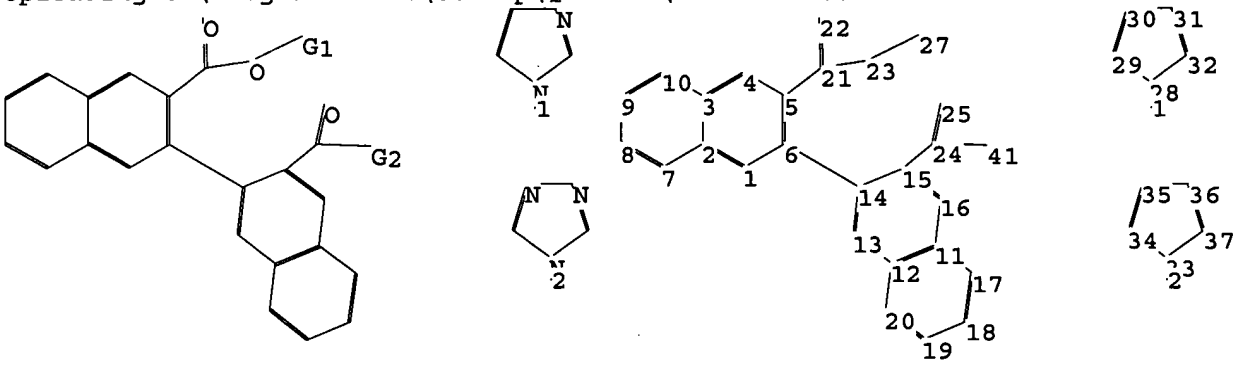


chain nodes :
21 22 23 24 25 27 41
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 28 29 30 31 32 33 34 35 36 37
chain bonds :
5-21 6-14 15-24 21-22 21-23 23-27 24-25 24-41
ring bonds :
1-2 1-6 2-3 2-7 3-4 3-10 4-5 5-6 7-8 8-9 9-10 11-12 11-16 11-17 12-13 12-20 13-14 14-15 15-16 17-18 18-19 19-20 28-29 28-32 29-30 30-31 31-32 33-34 33-37 34-35 35-36 36-37
exact/norm bonds :
21-22 21-23 23-27 24-25 24-41 28-29 28-32 29-30 30-31 31-32 33-34 33-37 34-35 35-36 36-37
exact bonds :
5-21 6-14 15-24
normalized bonds :
1-2 1-6 2-3 2-7 3-4 3-10 4-5 5-6 7-8 8-9 9-10 11-12 11-16 11-17 12-13 12-20 13-14 14-15 15-16 17-18 18-19 19-20
isolated ring systems :
containing 1 : 11 :

G1:H,CH3,Et,i-Pr,n-Bu,i-Bu,t-Bu

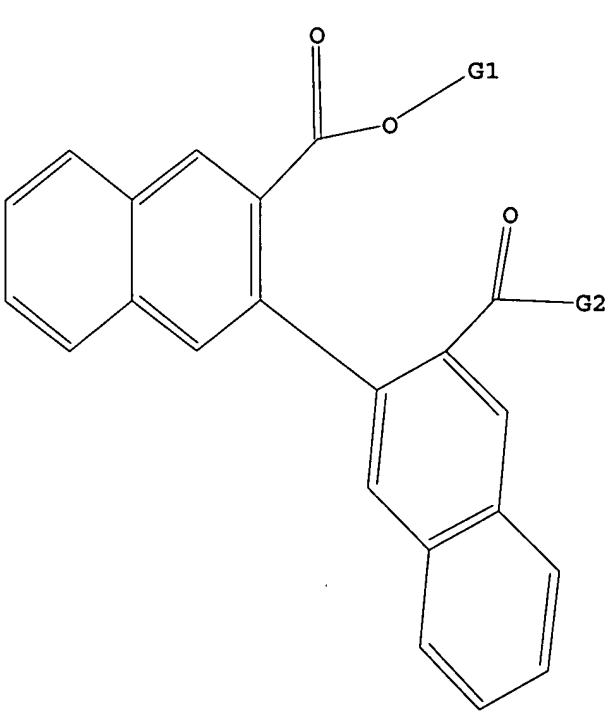
G2:OH,CN,[*1],[*2]

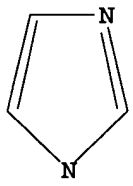
Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 27:CLASS 28:Atom
29:Atom 30:Atom 31:Atom 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom
41:CLASS

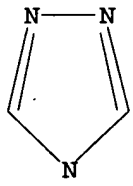
L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR





1



2

G1 H,Me,Et,i-Pr,n-Bu,i-Bu,t-Bu
G2 OH,CN,[@1],[@2]

Structure attributes must be viewed using STN Express query preparation.

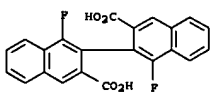
=> s l1 full
L3 10 SEA SSS FUL L1

=> file ca

=> s l3
L4 11 L3

=> d ibib abs hitstr 1-11

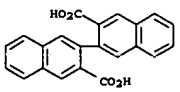
L4 ANSWER 1 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 144:191943 CA
TITLE: The abnormal behavior of an atropisomer: 3,3'-dibromo-1,1'-difluoro-2,2'-binaphthyl reacting with alkyllithium compounds
AUTHOR(S): Leroux, Frederic; Mangano, Giuseppe; Schlosser, Manfred
CORPORATE SOURCE: Laboratoire de Stereochimie (CNRS UMR 7509), Universite Louis Pasteur (ECPM), Strasbourg, 67087, Fr.
SOURCE: European Journal of Organic Chemistry (2005), (23), 5049-5054
CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 1-Fluoro-2-(triethylsilyl)naphthalene and other 1-fluoronaphthalene derivs. bearing a metalation-resistant substituent at the 2-position proved to be totally inert toward base attack. 3-Bromo-1-fluoronaphthalene, readily prepared from a 2-bromo isomer by deprotonation-triggered heavy halogen migration, was converted into 3,3'-dibromo-1,1'-difluoro-2,2'-binaphthyl (I) by consecutive treatment with lithium diisopropylamide, copper(II) bromide and nitrobenzene. The dilithiated intermediate generated from the atropisomer I by treatment with 2 equivalent of butyllithium reacted with a variety of electrophiles to afford products such as, diacid or bis(phosphane) derivs. . in high yields. The latter compound was also obtained in a straightforward manner from (4-fluoro-2-naphthyl)diphenylphosphine oxide. Unexpectedly, neither the 3,3'-dibromobinaphthyl I nor its 3,3'-diiodo analog were amenable to a unilateral but only to a double-sided halogen/metal permutation.
IT 874907-53-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of difluoro-2,2'-binaphthalene dicarboxylic acid and related study of reaction of (fluoro)naphthalene and atropisomer derivative dibromo-difluoro-binaphthalene with alkyllithium compds.)
RN 874907-53-6 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, 1,1'-difluoro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

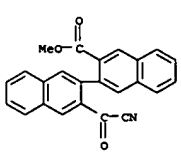
L4 ANSWER 1 OF 11 CA COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 2 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 143:248127 CA
TITLE: Efficient optical resolution of secondary alkyl alcohols by chiral supramolecular hosts
AUTHOR(S): Imai, Yoshitane; Sato, Tomohiro; Kuroda, Reiko
CORPORATE SOURCE: JST ERATO-SORST Kuroda Chiromorphology Team, Komaba, Meguro-ku, 153-0041, Japan
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2005), (26), 3289-3291
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel tunable multi-chiral supramol. host system was developed from non-chiral dicarboxylic acid and (1R,2R)-diphenylethylenediamine via chirality transfer, which enabled highly efficient optical resolution of secondary alkyl alcs. by simple crystallization of host compds. from alc. solution Due to rotation, [1,1'-biphenyl]-2,2'-dicarboxylic acid (I) is not chiral in solution; however, in a complex with (1R,2R)-1,2-diphenyl-1,2-ethanediamine (II), this compound can exhibit axial chirality. When a solution of I, II, and racemic butanol was mixed, a I-II host-guest compound was formed, wherein (S)-2-butanol was trapped between a hydrogen bond between the hydroxyl group and biphenyl acid anion. The conformation of I was fixed to be axially chiral, (R)-I.
IT 2178-03-2
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(optical resolution of secondary alkyl alc. derivs. via formation of supramol. multi-chiral inclusion complexes from binaphthalenedicarboxylic acid-(R,R)-di(phenyl)ethanediamine-chiral alc.)
RN 2178-03-2 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 141:260931 CA
TITLE: Advanced Method for Assignment of Absolute Configuration Utilizing an Induced CD and Computational Technique: Its Application to Natural Products Possessing a Secondary Alcohol
AUTHOR(S): Hosoi, Shinzo; Serata, Jun; Kiuchi, Fumiyuki; Sakushima, Akiyo; Ohta, Tomihisa
CORPORATE SOURCE: School of Pharmaceutical Sciences, Kyushu University of Health and Welfare, Nobeoka, 882-8508, Japan
SOURCE: Journal of Natural Products (2004), 67(9), 1568-1570
CODEN: JNPRDF; ISSN: 0163-3864
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:260931
AB A modified procedure for determining absolute configurations using an induced CD method and mol. mechanics calcns. is disclosed. The practical usefulness of the present technique was demonstrated by its application to a few natural products.
IT 386707-15-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(assignment of absolute configuration of natural products possessing a secondary alc. utilizing an induced CD and mol. mechanics calcns. using binaphthalene derivative)
RN 386707-15-9 CA
CN [2,2'-Binaphthalene]-3-carboxylic acid, 3'-(cyanocarbonyl)-, methyl ester (9CI) (CA INDEX NAME)

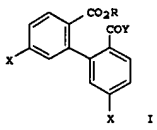


REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 138:72974 CA
TITLE: Preparation of achiral biaryl-type compounds, their use as chromophores for circular dichroism (CD), and determination of absolute configuration of chiral compounds
INVENTOR(S): Ota, Tomihisa; Hosoi, Shinzo
PATENT ASSIGNEE(S): Kanazawa University, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003002871	A2	20030108	JP 2001-187770	20010621
US 2003088104	A1	20030508	US 2002-82251	20020226
US 6727098	B2	20040427		
US 2004171662	A1	20040902	US 2004-785070	20040225
PRIORITY APPLN. INFO.:			JP 2001-187770 A	20010621
			US 2002-82251 A1	20020226

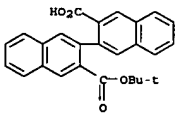
OTHER SOURCE(S): MARPAT 138:72974
GI



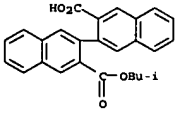
I

AB Determination of absolute configuration of chiral alcs., thiols, or amines involves introduction of achiral biaryl compds. I (R = H, Me, Et, iso-Pr, n-Bu, iso-Bu, tert-butyl; X = H, Me, Me2N, MeO, NO2, NH2, CN, Cl, Br; Y = OH, CN, imidazol-1-yl, 1,3,4-triazol-1-yl; when R = H, Y = OH, then X = Me2N, CN; when R = Me, Y = OH, then X = Me, Me2N, NO2, NH2, CN; when R = Et, Y = OH, then X = Me, Me2N, MeO, NO2; X = H, Y = OH, then R = tert-butyl) or their analogs as CD chromophores to the chiral compds. and, is based on the relative bulk of the substituents in the α C, the priority in the CIP method, and the exciton chirality. Thus, l- or d-menthol was esterified with 3-cyanocarbonyl-3'-methoxycarbonyl-2,2'-binaphthalene in the presence of DMAP to give (R)- or (S)-ester, resp. Their exciton chirality was - and +, resp.
IT 106653-99-0, 3-Carboxy-3'-methoxycarbonyl-2,2'-binaphthalene

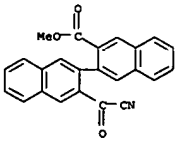
L4 ANSWER 4 OF 11 CA COPYRIGHT 2006 ACS on STN (Continued)



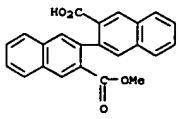
RN 482359-73-9 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, mono(2-methylpropyl) ester (9CI) (CA INDEX NAME)



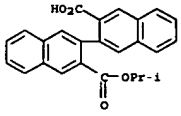
IT 386707-15-9P, 3-Cyanocarbonyl-3'-methoxycarbonyl-2,2'-binaphthalene
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of achiral biaryl-type compds. as CD chromophores for determination of absolute configuration of chiral compds.)
RN 386707-15-9 CA
CN [2,2'-Binaphthalene]-3-carboxylic acid, 3'-(cyanocarbonyl)-, methyl ester (9CI) (CA INDEX NAME)



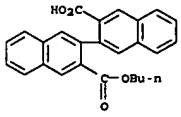
L4 ANSWER 4 OF 11 CA COPYRIGHT 2006 ACS on STN (Continued)
482359-70-6 482359-71-7 482359-72-8
482359-73-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of achiral biaryl-type compds. as CD chromophores for detn. of abs. configuration of chiral compds.)
RN 106653-99-0 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, monomethyl ester (9CI) (CA INDEX NAME)



RN 482359-70-6 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, mono(1-methylethyl) ester (9CI) (CA INDEX NAME)

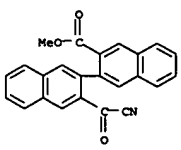


RN 482359-71-7 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, monobutyl ester (9CI) (CA INDEX NAME)



RN 482359-72-8 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, mono(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 137:185699 CA
TITLE: A Biomimetic Transformation of Serratinine into Serratezomine A through a Modified Polonovski Reaction
AUTHOR(S): Morita, Hiroshi; Kobayashi, Jun'ichi
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Hokkaido University, Sapporo, 060-0812, Japan
SOURCE: Journal of Organic Chemistry (2002), 67(15), 5378-5381
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:185699
AB Application of a modified Polonovski reaction for serratinine resulted in generation of serratezomine A with a novel seco-serratinine-type skeleton recently isolated from the club moss Lycopodium serratum var. serratum. This biomimetic transformation supports a biogenetic pathway proposed for serratezomine A. The absolute stereochem. of serratezomine A was established by an induced exciton chirality and modified Mosher methods.
IT 386707-15-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(biomimetic transformation of serratinine into serratezomine A through a modified Polonovski reaction)
RN 386707-15-9 CA
CN [2,2'-Binaphthalene]-3-carboxylic acid, 3'-(cyanocarbonyl)-, methyl ester (9CI) (CA INDEX NAME)



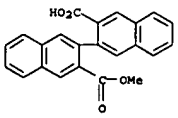
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 136:85715 CA
TITLE: Novel development of exciton-coupled circular dichroism based on induced axial chirality
AUTHOR(S): Hosoi, Shinzo; Kamiya, Makiko; Ohta, Tomihisa
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Kanazawa University, Kanazawa, 920-0934, Japan
SOURCE: Organic Letters (2001), 3(23), 3659-3662
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:85715

AB A simple method for determining the absolute configuration of chiral alcs. with a unique chromophoric reagent, 3-cyanocarbonyl-3'-methoxycarbonyl-2,2'-binaphthalene (I), based on induced exciton chirality has been developed. Thus, the alcs. were reacted with I to give the esters. The UV and CD data was collected. The structural feature of the α-positions of the carbinol carbon was found to be important to correlate the sign of the Cotton effect and the absolute stereochem. of the alcs. Practical usefulness of the present method was demonstrated by the determination of the absolute configuration of 17,18-dihydroxybergamottin.

IT **106653-99-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(absolute configuration of chiral alcs. via UV and exciton-coupled CD using binaphthalene derivative)

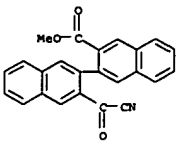
RN 106653-99-0 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, monomethyl ester (9CI) (CA INDEX NAME)



IT **386707-15-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(absolute configuration of chiral alcs. via UV and exciton-coupled CD using binaphthalene derivative)

RN 386707-15-9 CA
CN [2,2'-Binaphthalene]-3-carboxylic acid, 3'-(cyanocarbonyl)-, methyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 6 OF 11 CA COPYRIGHT 2006 ACS on STN (Continued)



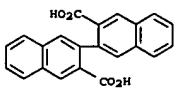
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 67:90570 CA
TITLE: Ozonolysis of polycyclic aromatics. XIV. Ozonation of pentaphene and benzo[rst]pentaphene
AUTHOR(S): Moriconi, Emil J.; Salce, Ludwig
CORPORATE SOURCE: Fordham Univ., New York, NY, USA
SOURCE: Journal of Organic Chemistry (1967), 32(9), 2829-36
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.

AB cf. CA 62: 497e. Ozonization of pentaphene (I) in CH2Cl2 at -78° with 1 mole equivalent O3 led to a peroxidic mixture which on reductive work-up (NaI in HOAc) gave 25% 2,2'-binaphthyl-3,3'-dicarboxaldehyde (II); oxidative work-up (NaOH, H2O2) led to 16% II, 2% phthalic acid (III), and 16% 2,2'-binaphthyl-3,3'-dicarboxylic acid (IV). In both instances, 28% unreacted I was recovered. II was also obtained from I via OsO4 oxidation to cis-6,7-dihydroxy-6,7-dihydropentaphene followed by aqueous NaIO4 oxidation. Chromic acid oxidation of II gave 14% IV, while IV was independently prepared in 71% yield via Cu2O coupling of the diazonium salt of 2-aminonaphthalene-3-carboxylic acid. II in base underwent an intramol. Cannizzaro reaction to 2,2'-binaphthyl-3-hydroxymethyl-3'-carboxylic acid which lactonized on treatment with strong acid or mild heat to an α-lactone. Ozonolysis of I with 4 mole equivs. O3 followed by oxidative work-up gave 9% III and 53% 2,2',4,4',5,5'-hexacarboxybiphenyl (V). The hexa-Me ester obtained from V was independently synthesized by an Ullman coupling of 5-bromo-1,2,4-tricarbomethoxybenzene. Ozonization of benzo[rst]pentaphene (VI) in CH2Cl2 at -78° with 3.5 mole equivalent O3, followed by oxidative work-up led to 17% benzo[rst]pentaphene-5,8-dione, 4% III, 10% p-terphenyl-2,2',3',2"-tetracarboxylic acid 2',3'-anhydride, and 3% 2-(o-carboxyphenyl)-1,10-phenanthrenedicarboxylic acid anhydride, with a 56% recovery of VI. A comparison of the reactivity to O3 of the noncarcinogenic I and related pentacyclic and hexacyclic hydrocarbons of increasing carcinogenicity indicates that there is no simple, consistent correlation between carcinogenicity, K- and L-region additivity toward O3, and the Pullman (P. and P., CA 50: 4756b) electronic theory of carcinogenesis. 35 references.

IT **2178-03-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 2178-03-2 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



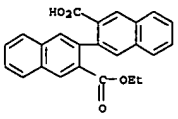
L4 ANSWER 8 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 62:82436 CA
ORIGINAL REFERENCE NO.: 62:14626g-h,14627a
TITLE: Syntheses of benzo[b]- and benzo[j]phenanthridines
AUTHOR(S): Klemm, L. H.; Weisert, Annekate
CORPORATE SOURCE: Univ. of Oregon, Eugene
SOURCE: Journal of Heterocyclic Chemistry (1965), 2(1), 15-20
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 62:82436
GI For diagram(s), see printed CA Issue.

AB The isomeric lactams benzo [b] phenanthridin-5(6H)-one (I) and benzo [j] phenanthridin-6(5H)-one (II) were obtained in equal yields by Schmidt reaction on 11H-benzo[b]fluoren-11-one (44% total) or by Beckmann reaction on 11H-benzo[b]fluoren-11-one oxime (22% total). Reduction of the lactams with lithium aluminum hydride gave the 5,6-dihydrobenzo[b]- and -[j]phenanthridines. Dehydrogenation of these dihydro derivatives produced the parent aromatic heterocycles benzo[b] - and benzo[j]phenanthridine in best overall yields of 20% and 12%, respectively. A few substituted benzophenanthridines were also prepared. Assignment of structures was based on uv, ir, and N.M.R. spectra of the dihydro derivatives as well as on separate unequivocal synthesis of the isomeric benzophenanthridines.

IT **2178-03-2**, [2,2'-Binaphthalene]-3,3'-dicarboxylic acid
(preparation of)

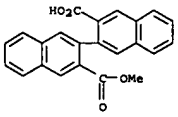
RN 2178-03-2 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid (7CI, 8CI, 9CI) (CA INDEX NAME)

L4 ANSWER 9 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 58:53289 CA
ORIGINAL REFERENCE NO.: 58:9081a-b
TITLE: Cyclizations with hydrazine. III. Syntheses of pentaphene and dinaphtho[2,1-d:1',2'-f] [1,2] diazocine
AUTHOR(S): Bacon, R. G. R.; Bankhead, Robert
CORPORATE SOURCE: Queen's Univ., Belfast, Ire.
SOURCE: Journal of the Chemical Society (1963) 839-45
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 58:53289
GI For diagram(s), see printed CA Issue.
AB cf. CA 52, 20099f. Reactions which normally result in nuclear coupling led to reductive dehalogenation of 2-substituted 1-halonaphthalenes, except in the case of Me 1-bromo-2-naphthoate, which, by an Ullmann reaction and further steps, was converted into 1,1'-binaphthyl-2,2'-dialdehyde. Starting with the nuclear coupling of diazotized 3-amino-2-naphthoic acid, a similar synthesis of 2,2'-binaphthyl-3,3'-dialdehyde was carried out. Reaction of hydrazine with the former dialdehyde gave exclusively the cyclic azine (I), whereas the latter dialdehyde underwent reductive cyclization exclusively, giving pentaphene (II) in 40% overall yield from the amino acid.
IT 90135-51-6, [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, ethyl ester 106653-99-0, [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, methyl ester
(preparation of)
RN 90135-51-6 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, ethyl ester (7CI) (CA INDEX NAME)



Provisional

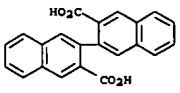
RN 106653-99-0 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, monomethyl ester (9CI) (CA INDEX NAME)



Provisional

L4 ANSWER 9 OF 11 CA COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 10 OF 11 CA COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 36:2769 CA
ORIGINAL REFERENCE NO.: 36:446i,447a-g
TITLE: Polycyclic aromatic hydrocarbons. XXVIII. Dibenzofluorenes
AUTHOR(S): Martin, Richard H.
SOURCE: Journal of the Chemical Society (1941) 679-85
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. C. A. 35, 4008.3. Heating 25 g. of 3,2-BrC10H6CO2Me (b1.5 170°) with 18 g. Cu bronze at 190-200° gives 18.8 g. of the Me ester, b0.6 260-70°, m. 173-3.5°, of 2,2'-binaphthyl-3,3'-dicarboxylic acid (I), m. 298-9°. I could not be converted into 2,3,6,7-dibenzofluorenone (II) by boiling with Ac2O; heating 5 g. of the Pb salt at 0.2 mm. over a free flame gives 1.5 g. of II, bright yellow, m. 269-70°. Reduction of 1 g. of II by heating with 6 cc. N2H4.H2O at 255° for 8 hrs. gives 2,3,6,7-dibenzofluorene, m. 282.5-3.5°, sublimes at 210°/0.1 mm. Heating 0.5 g. of II with 3 g. KOH for 0.5 hr. at 240-50° gives 2,2'-binaphthyl-3-carboxylic acid, m. 189-91°; heating with 50 parts of 80% H2SO4 on the water bath for 3 hrs. gives 1,2,6,7-dibenzofluorenone (IIA), orange, m. 211°; concentrated H2SO4 gives a carmine-red solution 1,2-BrC10H6CO2Me (19.7 g.) and 3 g. Cu bronze, heated at 190° and 10 g. of the Cu added in portions during 0.5 hr., with heating for an addnl. 4.5 hr., give 8.5 g. of Me 1,1'-binaphthyl-2,2'-dicarboxylate, m. 156.5-7.5°; the free acid (17.4 g.), refluxed 0.5 hr. with excess of Ac2O and the residue heated at 280° for 3 hrs., gives 9.4 g. of 3,4,5,6-dibenzofluorenone (III), dark red, m. 222-2.5°; the H2SO4 solution is carmine-red; oxime, orange-red, m. 253-4°. Reduction of 2 g. of III with N2H4.H2O (15 hrs. at 180°) gives 1.35 g. of 3,4,5,6-dibenzofluorene (IV), m. 152-2.5°; dipicrate, reddish brown, m. 154-5°, oxidation of IV with SeO2 gives III. Fusion of III with AlCl3-NaCl gives 1,2,8,9-dibenzanthrone, yellow, m. 185-6°. 1,2,7,8-Dibenzofluorene (V) (1.6 g.) with SeO2 at 230° for 6 hrs. gives 1.2 g. of 1,2,7,8-dibenzofluorenone (VI), m. 263-5.5°; fusion with KOH at 240-50° gives 2,2'-binaphthyl-1-carboxylic acid, m. 177-9°, which with 80% H2SO4 at 100° for 4 hrs. gives VI; reduction of VI with N2H4.H2O yields V. This behavior, together with the synthesis of II and IIA, establishes the structure of V and VI. 1-C10H7COCl (50 g.) and 36 g. tetralin in 40 cc. CS2, added to 38 g. of AlCl3 in 90 cc. CS2 in an ice bath, give 44 g. of the ketone, b0.8 230-5° (oxime, C21H18ON, m. 172-2.5°); dehydrogenation with S at 220° yields 20 g. of 1,2'-dinaphthyl ketone, 5 g. of which is reduced by AmONa to 4 g. of the carbinol (VII). Cyclization of 3 g. of VII by 6 g. HPO3 gives 1,2,5,6-dibenzofluorene but the yield is too small for the method to be of practical use. Reaction of chloromethyltetralin (32.9 g., b20 148°) with 31.8 g. MeCH(CO2Et)2 and 4.2 g. Na in 120 cc. C6H6 gives 29.5 g. of the ester, C19H26O4, b0.4 160-1°; heating the acid at 170° gives 23.8 g. of β-tetralyl-α-methylpropionic acid, b0.1 157°; the acid chloride with SnCl4 in C6H6 gives a mixture of ketones (VIII and IX), b0.4 125-35°; about 10% crystallized from petr. ether at -2° and m. 80.5-1.5°; the liquid b0.1 123°. Oxidation of the ketones gives only mellophanic acid. Reaction of the ketones with PhCH2CH2MgCl and dehydration of the carbinol with KHSO4 gives a hydrocarbon, C22H24, b0.1 174°; cyclization with AlCl3 in CS2 gives the satd. isomer, b0.15 176°; Se at 305° gives a hydrocarbon, C21H14, m. 306-8°.
IT 2178-03-2, [2,2'-Binaphthalene]-3,3'-dicarboxylic acid
(and derivs.)
RN 2178-03-2 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



Provisional

L4 ANSWER 11 OF 11 CA COPYRIGHT 2006 ACS on STN

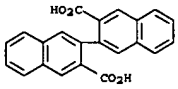
ACCESSION NUMBER: 22:22028 CA
ORIGINAL REFERENCE NO.: 22:2572d-e
TITLE: Naphthalene derivatives
PATENT ASSIGNEE(S): I. G. Farbenindustrie AG
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 278100		19271006	GB 1926-16931	19260706

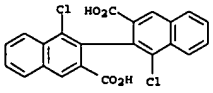
AB Dinaphthyldicarboxylic acids and their substitution products are obtained by treating diazo compds. derived from o- or peri-aminonaphthoic acids or their derivs. with suitable reducing agents such as an ammoniacal solution of Cu2O or a neutral solution of Na2SO3 or a ferrous salt. Examples are given of the production of 1,1'-dinaphthyl-8,8'-di-carboxylic acid, 2,2'-dinaphthyl-3,3'-dicarboxylic acid, 1,1'-dinaphthyl-2,2'-dicarboxylic acid, 2,2'-dinaphthyl-3,3'-dicarboxylic acid diethyl ester, 1,1'-dichloro-2,2'-dinaphthyl-3,3'-dicarboxylic acid, 4,4'-dibromo-1,1'-dinaphthyl-8,8'-dicarboxylic acid, 4,4'-dichloro-1,1'-dinaphthyl-8,8'-dicarboxylic acid, 1,1'-dinaphthyl-4,4'-disulfo-8,8'-dicarboxylic acid, 5,5'-dimethoxy-1,1'-dinaphthyl-8,8'-dicarboxylic acid and the corresponding diethoxy compound Cf. C. A. 23, 2380.

IT **2178-03-2**, [2,2'-Binaphthalene]-3,3'-dicarboxylic acid
859931-11-6, [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, 1,1'-dichloro-
(preparation of)

RN 2178-03-2 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 859931-11-6 CA
CN [2,2'-Binaphthalene]-3,3'-dicarboxylic acid, 1,1'-dichloro- (3CI) (CA INDEX NAME)



L4 ANSWER 11 OF 11 CA COPYRIGHT 2006 ACS on STN (Continued)

10/785,070

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=> file marpat

=> s l1 full
L5            10 SEA SSS FUL L1

=> s l5/com
L6             9 L5/COM

=> d ibib abs fqhit 1-9
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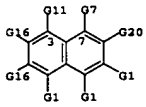
L6 ANSWER 1 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 143:360057 MARPAT
TITLE: 11-beta hydroxysteroid dehydrogenase type 1 inhibitors as anti-obesity/anti-diabetes compounds and 17-beta hydrosteroid dehydrogenase type i inhibitors as useful agents for the treatment of cancers, especially breast cancer
INVENTOR(S): Vander Jagt, David L.; Royer, Robert E.; Deck, Lorraine M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005228038	A1	20051013	US 2005-93493	20050330

PRIORITY APPLN. INFO.: US 2004-560387P 20040408

AB This invention is directed to the discovery that 11-Beta Hydroxysteroid Dehydrogenase Type 1 may be a common mol. etiol. for visceral obesity and the metabolic syndrome of obesity as well a treatment for diabetes, especially type II diabetes. The present invention also relates to the use of certain compds. as inhibitors of 17-Beta Hydroxysteroid Dehydrogenase Type 1 and their use for the treatment of cancer, especially breast cancer.

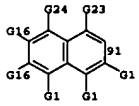
MSTR 1A



G1 = 14

G2 = OH
G20 = 91

L6 ANSWER 1 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)



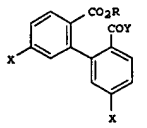
Patent location: claim 1
Note: and pharmaceutically acceptable salts

L6 ANSWER 2 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 138:72974 MARPAT
TITLE: Preparation of achiral biaryl-type compounds, their use as chromophores for circular dichroism (CD), and determination of absolute configuration of chiral compounds
INVENTOR(S): Ota, Tomihisa; Hosoi, Shinzo
PATENT ASSIGNEE(S): Kanazawa University, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003002871	A2	20030108	JP 2001-187770	20010621
US 2003088104	A1	20030508	US 2002-82251	20020226
US 6727098	B2	20040427		
US 2004171662	A1	20040902	US 2004-785070	20040225

PRIORITY APPLN. INFO.: JP 2001-187770 20010621
US 2002-82251 20020226

GI

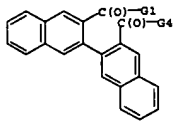


I

AB Determination of absolute configuration of chiral alcs., thiols, or amines involves introduction of achiral biaryl compds. I (R = H, Me, Et, iso-Pr, n-Bu, iso-Bu, tert-butyl; X = H, Me, Me2N, MeO, NO2, NH2, CN, Cl, Br; Y = OH, CN, imidazol-1-yl, 1,3,4-triazol-1-yl; when R = H, Y = OH, then X = Me2N, CN; when R = Me, Y = OH, then X = Me, Me2N, NO2, NH2, CN; when R = Et, Y = OH, then X = Me, Me2N, MeO, NO2; X = H, Y = OH, then R = tert-butyl) or their analogs as CD chromophores to the chiral compds. and, is based on the relative bulk of the substituents in the α C, the priority in the CIP method, and the exciton chirality. Thus, l- or d-menthol was esterified with 3-cyanocarbonyl-3'-methoxycarbonyl-2,2'-binaphthalene in the presence of DMAP to give (R)- or (S)-ester, resp. Their exciton chirality was - and +, resp.

MSTR 2

L6 ANSWER 2 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)

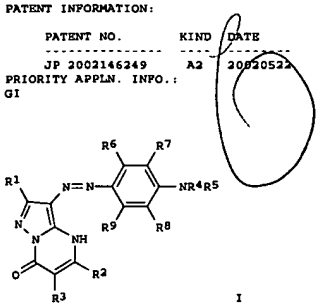


G1 = OH
G4 = OH
Patent location: claim 1
Note: substitution is restricted

L6 ANSWER 3 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 136:387542 MARPAT
TITLE: Black waterborne storage-stable ink-jet inks and printing method using them
INVENTOR(S): Adachi, Keiichi
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002146249	A2	20020522	JP 2000-341683	20001109

PRIORITY APPLN. INFO.: JP 2000-341683 20001109
GI



I

AB The inks contain a dye of I type (R1-3 = H, halogens, alkyl, aryl, CN, acyl, carbamoyl, alkoxycarbonyl, aryloxycarbonyl, acyloxy, alkoxy, aryloxy, alkylthio, arylthio, sulfamoyl, alkylsulfonyl, arylsulfonyl or amino groups; R4, R5 = H, alkyl, aryl groups; R6-9 = H, halogens, alkyl, aryl, carbamoyl, alkoxy, aryloxy, alkylthio, arylthio, sulfamoyl, alkylsulfonyl, arylsulfonyl or amino groups provided that at least 1 of R1 to R9 is sulfonic acid or carboxylic acid or their salts), optionally a naphthalene type azo dye and other additives.

MSTR 2

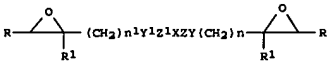
G1 = naphthyl (substd. by 1 or more G2)
G2 = CO2H
G6 = naphthyl (substd. by 1 or more G2)
Patent location: claim 3

L6 ANSWER 3 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)
Note: substitution is restricted

L6 ANSWER 4 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 133:223160 MARPAT
TITLE: Epoxides with a liquid crystalline phase, and processes and photoinitiators for their conversion to epoxy resins
INVENTOR(S): Schnurpfeil, Guenter; Schroeder, Hendrik; Hartwich, Andreas; Harder, Andreas
PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany
SOURCE: Ger. Offen., 13 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10004442	A1	20000907	DE 2000-10004442	20000202

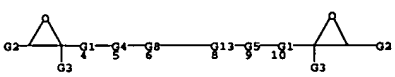
PRIORITY APPLN. INFO.: DE 1999-19904028 19990202
GI



I

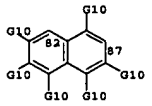
AB The epoxides have the general formula I [R = H, aryl, alkyl; R1 = H, alkyl; X = direct link, CO2, CR2:CR2, CR2:N, CH:N(O), N:N, N:N(O); each R2 = H, alkyl; Y, Y1 = O, S, CH2, CO2; Z, Z1 = (un)substituted divalent aromatic, alicyclic, or heterocyclic group; n, n1 = 1-16]. The photoinitiator for manufacture of the epoxy resin is selected from imidazole derivs., BF3 complexes, Fe(II) aromatic complexes, iodonium salts, ammonium salts and sulfonium salts. Thus, 4-HOC6H4CO2C6H4OH-4 was etherified with 2 equiv Br(CH2)4CH:CH2, and the product was epoxidized with 3-ClC6H4CO3OH to give a diepoxide which exhibited a liquid crystalline phase between 49° and 54°.

MSTR 1B

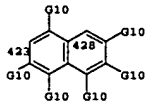


G8 = 82-5 87-8

L6 ANSWER 4 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)



G10 = CO2H
G13 = 423-6 428-9



Patent location: claim 1

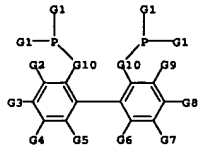
L6 ANSWER 5 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 126:199271 MARPAT
TITLE: Process for the hydroformylation of water-insoluble unsaturated compounds with rhodium-phosphine catalyst systems
INVENTOR(S): Bahrmann, Helmut; Lappe, Peter; Fell, Bernhard; Xia, Zhigao; Kanagasabapathy, Subba
PATENT ASSIGNEE(S): Hoechst A.-G., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19532393	A1	19970306	DE 1995-19532393	19950902
TW 389751	B	20000511	TW 1996-85109975	19960816
CA 2184048	AA	19970303	CA 1996-2184048	19960823
CA 2184048	C	19990525		
EP 761635	A1	19970312	EP 1996-113605	19960824
EP 761635	B1	19990804		
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
AT 182876	E	19990815	AT 1996-113605	19960824
ES 2137604	T3	19991216	ES 1996-113605	19960824
ZA 9607228	A	19970303	ZA 1996-7228	19960826
US 5756854	A	19980526	US 1996-701775	19960826
PL 183632	B1	20020628	PL 1996-315833	19960826
AU 9664390	A1	19970306	AU 1996-64390	19960830
CN 1149043	A	19970507	CN 1996-111973	19960830
JP 09124534	A2	19970513	JP 1996-230636	19960830
JP 3042835	B2	20000522		
BR 9603617	A	19980519	BR 1996-3617	19960830
GR 3031630	T3	20000131	GR 1999-402619	19991015

PRIORITY APPLN. INFO.: DE 1995-19532393 19950902
AB Unsatd. compds. (e.g., Me linolenate) are hydroformylated in a polar organic solvent (e.g., MeOH) using a catalyst system comprising Rh carbonyl compds. and water-soluble salts of sulfonated or carboxylated organic mono- or polyphosphines (e.g., Ph2PCH2CH2CH2CH2SO3Li) with synthesis gas at 60-180°/2-35 MPa and, after organic solvent distillation, the catalyst is recovered by extracting the distillation residue with water.

MSTR 3

L6 ANSWER 5 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)



G5 = carboxylate
G6 = carboxylate
G10 = (0-5) CH2
G2 +G3 = CH=CHCH=CH
G8 +G9 = CH=CHCH=CH
Patent location: claim 15
Note: at least one sulonate or carboxylate group must be present

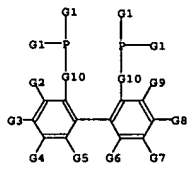
L6 ANSWER 6 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 121:107982 MARPAT
TITLE: Process for the preparation of aldehydes by hydroformylation using rhodium-phosphine catalysts and phosphonium salt solubilizers
INVENTOR(S): Bahrmann, Helmut; Lappe, Peter
PATENT ASSIGNEE(S): Hoechst A.-G., Germany
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 602463	A1	19940622	EP 1993-119413	19931202
EP 602463	B1	19961113		
R: BE, DE, ES, FR, GB, IT, NL, SE				
DE 4242723	A1	19940623	DE 1992-4242723	19921217
ES 2096187	T3	19970301	ES 1993-119413	19931202
CA 2111032	AA	19940618	CA 1993-2111032	19931209
CA 2111032	C	20000502		
BR 9305009	A	19940705	BR 1993-5009	19931210
JP 06293692	A2	19941021	JP 1993-310809	19931210
JP 2577187	B2	19970129		
US 5367107	A	19941122	US 1993-166577	19931213
AU 9352437	A1	19940630	AU 1993-52437	19931215
AU 661257	B2	19950713		

PRIORITY APPLN. INFO.: DE 1992-4242723 19921217
OTHER SOURCE(S): CASREACT 121:107982
AB Aldehydes are prepared by liquid-phase hydroformylation of C6-20 olefins with CO and H2 in an aqueous solution of a water-soluble Rh-phosphine-complex catalyst and a quaternary phosphonium salt serving as a solubilizing agent. For example, a catalyst solution was prepared from tri-Na tris(m-sulfophenyl)phosphine, tetradecyltriethylphosphonium bromide (I), H2O, buffer solution (pH 6.0), and Rh acetate, the mixture of which was heated under synthesis gas (CO/H2 = 1:1) at 110° and 2.5 MPa. Hydroformylation of 1-tetradecene in the catalyst solution under the same conditions for 6 h gave 74.2% conversion to aldehydes, with activity (mol aldehyde/mol Rh·min) of 3.10 and productivity (g aldehyde/mL catalyst solution·h) of 0.075. In contrast, a run without I gave only 0.10% conversion, with both activity and productivity values of 0.00.

MSTR 3

L6 ANSWER 6 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)



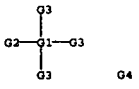
G5 = CO2H
G6 = CO2H
G10 = (0-5) CH2
G2 +G3 = CH=CHCH=CH (opt. substd. by G11)
G8 +G9 = CH=CHCH=CH (opt. substd. by G11)
Patent location: claim 7
Note: at least one carboxy or sulfo group must be present

L6 ANSWER 7 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 121:107978 MARPAT
TITLE: Preparation of higher primary alcohols
INVENTOR(S): Bahrmann, Helmut; Deckers, Gregor; Greb, Wolfgang; Heymanns, Peter; Lappe, Peter; Mueller, Thomas; Szameitat, Juergen; Wiebus, Ernst
PATENT ASSIGNEE(S): Hoechst A.-G., Germany
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 602442	A2	19940622	EP 1993-119242	19931130
EP 602442	A3	19941109		
R: BE, DE, ES, FR, GB, IT, NL, SE				
DE 4242725	A1	19940623	DE 1992-4242725	19921217
US 6051743	A	20000418	US 1993-163086	19931207
CA 2111026	AA	19940618	CA 1993-2111026	19931209
JP 06279334	A2	19941004	JP 1993-309456	19931209
JP 07039362	B4	19950501		
BR 9305007	A	19940705	BR 1993-5007	19931210
ZA 9309292	A	19940804	ZA 1993-9292	19931210
AU 9352439	A1	19940630	AU 1993-52439	19931215
AU 664126	B2	19951102		
PRIORITY APPLN. INFO.:			DE 1992-4242725	19921217

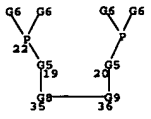
AB The title process comprises hydroformylation of a (Fischer-Tropsch) olefin in the presence of Rh or a compound thereof, a water-soluble phosphine, and a salt comprising a Z+ABCD cation [A = (ar)alkyl; B,C,D = alkyl; Z = N or P] and a water-soluble sulfonated or carboxylated aromatic phosphine anion followed by hydrogenation. Thus, a mixture comprising a primarily nonene-containing Fischer-Tropsch olefin, a water solution of [3-(NaO3S)C6H4]3P and the corresponding trimethyltetradecylammonium salt, Rh acetate, and a NaOac/HOAc buffer was maintained 6h at 125° under 2.5MPa CO/H to give 85% olefin conversion.

MSTR 1

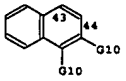


G4 = 22

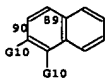
L6 ANSWER 7 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)



G5 = (0-5) CH2
G8 = 43-19 44-36



G9 = 89-20 90-35

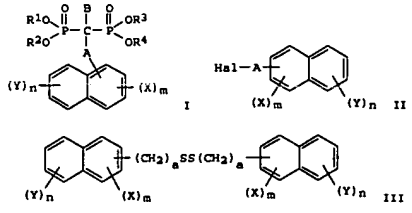


G10 = carboxylate
Patent location: claim 1

L6 ANSWER 8 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 120:134812 MARPAT
TITLE: Preparation of methylenediphosphonic acid derivatives as drugs
INVENTOR(S): Tanahashi, Masahiko; Senba, Yuriko; Nakadate, Akio; Kawabe, Norio; Uchiro, Takumi
PATENT ASSIGNEE(S): Toray Industries, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05194565	A2	19930803	JP 1992-183866	19920710
JP 3341303	B2	20021105		
CA 2111670	AA	19940120	CA 1993-2111670	19930108
WO 9401442	A1	19940120	WO 1993-JP14	19930108
W: CA, KR, US				
RW: BE, CH, DE, ES, FR, GB, IT, NL, SE				
EP 603401	A1	19940629	EP 1993-901565	19930108
EP 603401	B1	20010411		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
ES 2155446	T3	20010516	ES 1993-901565	19930108
US 5618804	A	19970408	US 1994-178320	19940114
PRIORITY APPLN. INFO.:			JP 1991-171081	19910711
			JP 1992-183866	19920710
			WO 1993-JP14	19930108

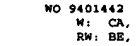
OTHER SOURCE(S): CASREACT 120:134812
GI



AB Title compds. I [R1-R4 = H, alkyl, cation; X, Y = substituent on the naphthyl radical such as halo, nitro, alkyl, (un)substituted amino; A = (thia)(oxa)(aza)polymethylene; B = H, alkyl, amino, etc.; m = 0-3 integer; n = 0-4 integer], useful as antiinflammatories, antirheumatics, interleukin-1 inhibitors, antioxidants, inhibitors of bone resorption, as well as drugs for bone metabolism, are prepared by reacting CH2[P(O)(OR5)(OR6)]2

L6 ANSWER 8 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)
(R5, R6 = C1-7 alkyl) with naphthylene derivs. II (Hal = halo) or III (a = 0-10 integer). A mixt. of tetra-Et methylenediphosphonate, 2,2'-dinaphthyl disulfide, and BuLi in hexane-THF was stirred at room temp. for 16 to give, after pouring into ice water and treatment with HCl, [(2-naphthylthio)methylene]diphosphonic acid tetra-Et ester, which was treated with Me3SiCl in CH2Cl2 at room temp. for 72 h and the product refluxed in aq. MeOH for 30 min to give [(2-naphthylthio)methylene]diphosphonic acid. In an in vitro study this showed 41.7% inhibition against interleukin-1.

MSTR 3



G1 = naphthyl (opt. substd. by 1 or more G2)
G2 = CO2H
G7 = bond
Patent location: claim 3

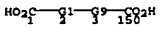
L6 ANSWER 9 OF 9 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 116:235246 MARPAT
TITLE: Process for preparing diketones and keto acids
INVENTOR(S): Walker, Theodore Roosevelt, Jr.; Jackson, Winston Jerome, Jr.; Fleischer, Jean Carroll
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9201662	A1	19920206	WO 1991-US5122	19910722
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
US 5107029	A	19920421	US 1990-556678	19900723
EP 540653	A1	19930512	EP 1991-914436	19910722
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05508416	T2	19931125	JP 1991-513366	19910722
PRIORITY APPLN. INFO.:			US 1990-556678	19900723
			WO 1991-US5122	19910722

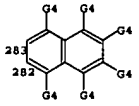
OTHER SOURCE(S): CASREACT 116:235246

AB The title compds. were prepared by reaction of a dicarboxylic acid and an aromatic compound in the presence of an alkanesulfonic acid and an organic anhydride. Thus, isophthalic acid and Ph2O reacted in the presence of MeSO3H and (CF3CO)2O to give a 95% yield of 1,3-bis(4-phenoxybenzoyl)benzene, which contained 7% tetraketone oligomer.

MSTR 2B

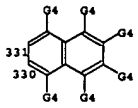


G1 = 283-1 282-3



G9 = 331-2 330-150

L6 ANSWER 9 OF 9 MARPAT COPYRIGHT 2006 ACS on STN (Continued)



Patent location: claim 1

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L3          10 S L1 FULL

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L4          11 S L3

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L6           9 S L5/COM

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